

Amendments to the Claims:

The following listing of claims replaces all prior versions and listings of claims, in the application.

Listing of Claims

- B2
1. (Currently amended) A method ~~suitable~~ for fumigating ~~a large~~ a previously habitable enclosed volume and contents ~~requiring fumigation~~ and restoring habitability, comprising the steps of:
 - climatizing ~~[[a]]~~ the enclosed volume ~~requiring fumigation~~ containing contents;
 - generating chlorine dioxide gas using a generator;
 - introducing the chlorine dioxide gas into the enclosed volume using at least one emitter ~~requiring fumigation~~;
 - distributing the introduced chlorine dioxide gas in the enclosed volume ~~requiring fumigation~~;
 - maintaining a residual amount of the chlorine dioxide gas within the enclosed volume ~~requiring fumigation under environmentally safe conditions~~ at a level and duration permitting gaseous penetration of included contents as required for decontamination; and
 - removing the chlorine dioxide gas from the enclosed volume ~~requiring fumigation~~, thereby fumigating the ~~large~~ enclosed volume and contents and restoring habitability.
 2. (Currently amended) The method of claim 1 wherein the step of removing the chlorine dioxide gas includes the steps of purging the generator and emitter and scrubbing chlorine dioxide gas ~~is removed~~ from the enclosed volume ~~requiring fumigation with the same equipment that was used to introduce the chlorine dioxide gas~~.
 3. (Original) The method of claim 1 wherein the chlorine dioxide gas is generated as a solution of chlorine dioxide gas in a liquid.
 4. (Original) The method of claim 3 wherein the liquid is water.

5. (Currently amended) The method of claim ~~[[1]]~~ 2 wherein the ~~ehlorine dioxide gas is introduced using an emitter~~ used in the step of introducing chlorine dioxide gas is used in the step of scrubbing chlorine dioxide gas.
6. (Original) The method of claim 5 wherein the emitter is a stripper.
7. (Original) The method of claim 1 wherein the step of climatizing the volume requiring fumigation includes the step of adjusting the relative humidity.
8. (Original) The method of claim 1 wherein the step of climatizing the volume requiring fumigation includes the step of adjusting the temperature.
- B2 9. (Currently amended) The method of claim 1 wherein the step of climatizing ~~the volume requiring fumigation~~ includes the step of avoiding condensation ~~exceeding the dew point.~~
10. (Currently amended) The method of claim 1 wherein the step of climatizing the enclosed volume ~~requiring fumigation~~ includes the step of reducing the level of illumination.
11. (Currently amended) The method of claim 1 wherein the enclosed volume ~~requiring fumigation~~ is a ~~portion of a building~~ or an enclosed portion thereof.
- Smith 12. (Currently amended) The method of claim 1 wherein the enclosed volume ~~requiring fumigation~~ is a vehicle.
13. (Currently amended) The method of claim 1 wherein the step of distributing the introduced chlorine dioxide gas comprises using a heating ventilation and air conditioning (HVAC) system.

14. (Currently amended) The method of claim 1 wherein the enclosed volume ~~requiring fumigation~~ is maintained substantially dark.
15. (Original) The method of claim 1 wherein the chlorine dioxide gas is present in the introduced gas at a concentration of at least 90%.
16. (Original) The method of claim 1 wherein the chlorine dioxide gas is present in the introduced gas at a concentration of at least 95%.
17. (Original) The method of claim 1 wherein the chlorine dioxide gas is present in the introduced gas at a concentration of at least 99%.
- B-2 18. (Currently amended) The method of claim 1 wherein ~~the same apparatus~~ a stripper is used to climatize the enclosed volume ~~requiring fumigation~~ and to introduce the chlorine dioxide gas into the enclosed volume ~~requiring fumigation~~.
19. (Previously presented) The method of claim 1 wherein said chlorine dioxide gas contains less than about 5% of chlorine gas.
20. (Previously presented) The method of claim 1 wherein said chlorine dioxide gas contains less than about 0.5% chlorine gas.
21. (Previously presented) The method of claim 1 wherein said volume is maintained at a slightly negative pressure to areas located outside of said volume.
22. (Previously presented) The method of claim 4 wherein said chlorine dioxide solution has an equilibrium partial pressure below about 26,000 ppm V.
23. (Currently amended) The method of claim 1 wherein ~~said~~ the contents in ~~said~~ the enclosed volume include surfaces that are gas penetrable.

24. (Currently amended) The method of claim 1 ~~which~~ further comprising the steps of
comprises monitoring and controlling the dew point within said volume temperature and
relative humidity during said fumigation to avoid condensation.
25. (Previously presented) The method of claim 1 wherein the temperature during the
fumigating is 70-80°F and the relative humidity during the fumigating is 60-80%.
26. (Currently amended) The method of claim 1 wherein the residual level of chloride
dioxide in said volume during fumigating is 500 ppm V to about 3000 ppm V.
27. (Previously presented) The method of claim 26 wherein the fumigating is carried out for
about 8 to about 12 hours.
- 3 2 28. (Previously presented) The method of claim 1 wherein the residual level of chloride
dioxide in said volume during fumigating is maintained at about 750 ppm V for about 8
to about 12 hours.
29. (Previously presented) The method of claim 1 wherein the residual level of chloride
dioxide in said volume during fumigating is maintained at about 1000 ppm V for about
8 to about 12 hours.
30. (Previously presented) The method claim 1 wherein the residual level of chloride
dioxide in said volume during fumigating is maintained at about 3000 ppm V for about
8 to about 12 hours.
31. (Currently amended) The method of claim 1 wherein ~~said~~ the enclosed volume ~~requiring~~
~~fumigation~~ is contaminated with gram positive spores.
32. (Previously presented) The method of claim 31 where said spores are *Bacillus subtilis*.
33. (Previously presented) The method of claim 31 where said spores are *Bacillus anthracis*.

34. (Previously presented) The method of claim 1 wherein the humidity is reduced to less than about 35% during removal of the chlorine dioxide gas.
35. (Previously presented) The method of claim 1 wherein the removing of the chlorine dioxide gas takes at least 5-6 hours.
36. (New) The method of claim 2 wherein a stripper is used to introduce the chlorine dioxide gas into the enclosed volume and to scrub the chlorine dioxide gas from the enclosed volume.
- B² 37. (New) The method of claim 1 wherein the step of removing the chlorine dioxide gas includes the step of introducing detoxification chemicals.
38. (New) The method of claim 37 wherein the detoxification chemicals comprise an aqueous mixture of a bisulfite and caustic.
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